In the variant illustrated in FIGS. **5** and **6**, the outer surface **35** of the valve **17** comprises a plurality of blocking pins **113** which protrude radially outwards. In this example, the blocking pins **113** are arranged in two transverse planes which are axially spaced-apart. Each transverse plane comprises three blocking pins **113** which are distributed angularly about the axis X-X'.

The inner surface **50** of the endoprosthesis **21** delimits recesses **115** having shapes which correspond to the blocking pins **113**. As illustrated in FIG. **6**, each blocking pin **113** delimits two angular stop surfaces **117**A and **117**B which co-operate with two corresponding angular stop front faces **119**A, **119**B which are delimited in the recesses **115**.

In this manner, when the valve **17** is implanted in the endoprosthesis **21** and the pins **113** are inserted in the corresponding recesses **115**, the valve **17** is axially blocked in terms of translation relative to the endoprosthesis **21** and blocked angularly around the axis X-X' relative to the endoprosthesis **21**.

In a variant which is not illustrated, the pins **113** are inserted directly into the holes provided between the filaments of the reinforcement of the trellis **99**. The endoprosthesis **19** has a cross-section which is substantially constant along the axis X-X'.

Owing to the invention which has been described above, it is therefore possible to provide an implantation kit which allows a prosthetic valve **17** to be fixed in a tubular endoprosthesis **21** in a precise, secure and removable manner using simple and cost-effective means.

The invention claimed is:

1. A kit to be implanted in a blood vessel, said kit comprising:

a prosthetic valve including a carrier reinforcement; and

a tubular endoprosthesis comprising an extendable tubular trellis, said endoprosthesis having:

an outer surface with a proximal portion, a central portion, and a distal portion aligned along a longitudinal axis of said endoprosthesis, each of said proximal portion, said central portion, and said distal portion being cylindrical; and

an inner surface delimiting a channel extending parallel to the longitudinal axis, said inner surface having at least two portions in which a cross-sectional area of said channel varies along the longitudinal axis at said at least two portions, said at least two portions forming a proximal stop and a distal stop, said at least two portions being connected to each other by a radially recessed central portion having a first length, and said central portion of said inner surface delimiting a housing with said at least two portions for receiving said carrier reinforcement of said prosthetic valve;

wherein said prosthetic valve is to be implanted in said channel, and said prosthetic valve includes:

said carrier reinforcement having an outer surface to be pressed against said inner surface of said endoprosthesis when implanted within said channel, said outer surface of said carrier reinforcement having a support portion with a second length substantially equal to said first length of said central portion of said inner surface, and said carrier reinforcement being radially deformable from a folded position for placement to a deployed position for implantation; and

a flexible shutter connected to said carrier reinforcement and deformable between a blocking position, in which said flexible shutter is extended transversely, and a release position, in which said flexible shutter is contracted transversely due to flow moving through said channel; and

wherein said endoprosthesis is configured so that, when said kit is assembled and said prosthetic valve is inserted into said endoprosthesis, said carrier reinforcement is received within said housing of said endoprosthesis so that axial displacement of said carrier reinforcement in two opposing axial directions beyond the proximal stop and the distal stop is prevented.

2. The kit according to claim **1**, wherein each of said at least two portions is an annular contraction protruding into said channel.

3. The kit according to claim **1**, wherein said at least two portions are radio-opaque.

4. The kit according to claim **1**, wherein each of said at least two portions is formed as a shoulder portion.

5. The kit according to claim **4**, wherein said at least two portions comprise a first shoulder portion and a second shoulder portion, wherein an intermediate portion of said endoprosthesis is located between said first shoulder portion and said second shoulder portion and has a uniform cross section along an axial direction thereof, said prosthetic valve to be arranged within said intermediate portion.

6. The kit according to claim **4**, wherein said at least two portions comprise a first shoulder portion and a second shoulder portion, wherein each of said first shoulder portion and said second shoulder portion has an edge forming a respective one of said proximal stop and said distal stop, and against which said support portion abuts so as to prevent axial displacement of said support portion and said carrier reinforcement.

7. The kit according to claim **1**, wherein each of said at least two portions has an edge forming a respective one of said proximal stop and said distal stop, and against which said support portion abuts so as to prevent axial displacement of said support portion and said carrier reinforcement.

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